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EXAMINER

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Art Unit:



UNITED STATES DEPARTMENT OF COMMERCE  
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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Paper No. 16

Application Number: 08/855,895

Filing Date: 05/12/97

Appellant(s): David J. Stevens et al.

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Mark V. Muller  
For Appellant

MAILED  
JUL 19 1999  
GROUP 3600

**EXAMINER'S ANSWER**

Art Unit:

This is in response to appellant's brief on appeal filed 05/05/99. No supplemental appeal briefs have been filed as of 07/15/99.

**(1) *Real Party in Interest***

*A statement identifying the real party in interest is contained in the brief.*

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is incorrect. A correct statement of the status of the claims is as follows:

Claims 30-31 are allowable over the art of record.

Claims 2-3, 9, 18-20, and 27 are objected to.

Claims 1, 4, 6-8, 17, and 25-26 are rejected.

Claims 5, 10-16, 21-24, and 28-29 are withdrawn from consideration.

Claims 1, 4, 6-8, 17, and 25-26 are considered in this appeal (not claims 1-9, 17-21, 25-28, and 30-32). Claims 5, 21, and 28 have been withdrawn from consideration. Claim 32 is not entered because the amendment after final (paper #11) has not been entered. The remaining claims 2-3, 9, 18-20, and 27 have been indicated as allowable if rewritten in independent

Art Unit:

form. Claims 30-31 have been indicated as being allowable. Consequently, there is no issue to appeal with regard to claims 2-3, 9, 18-20, 27, and 30-31.

This appeal involves claims 1, 4, 6-8, 17, and 25-26.

Claims 30-31 are allowed.

Claims 2-3, 9, 18-20, and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 5, 10-16, 21-24, and 28-29 are withdrawn from consideration as not directed to the elected species or invention.

**(4) *Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

With regard to the issue of amending claim 5 as proposed, this claim has been withdrawn from consideration. Proposed amendments to this claim would be denied as requiring further consideration.

The amendment after final rejection filed on 03/10/99 (paper #11) has not been entered.

**(5) *Summary of Invention***

The summary of invention contained in the brief is correct.

**(6) *Issues***

Art Unit:

The appellant's statement of the issues in the brief is substantially correct. The changes are as follows:

Appellant's brief presents arguments relating to issues of whether or not the imposed restriction requirement was properly made (item A). This issue relates to petitionable subject matter under 37 CFR 1.181 and not to appealable subject matter. See MPEP §§ 1002 and 1201.

**(7) *Grouping of Claims***

Appellant's brief includes a statement that claims 1, 4, 6-8, 17, and 25-26 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

**(8) *ClaimsAppealed***

A substantially correct copy of appealed claims 1, 4, 6-8, 17, and 25-26 appears on pages 40-46 of the Appendix to the appellant's brief. The minor errors are as follows:

Although a complete and correct copy of the claims on appeal (claims 1, 4, 6-8, 17, and 25-26) has been given. Also included is a copy of claims not on appeal for reasons that the claims have been withdrawn from consideration (claims 5, 21, 28); allowed (claims 30-31); objected to (claims 2-3, 9, 18-20, 27) or denied entry (claim 32).

**(9) *Prior Art of Record***

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

Patent Number	Name	Issue Date	Filing Date
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Art Unit:

5,792,976	Genovese	08/11/98	07/17/97
5,584,507	Khandhadia et al.	12/17/96	10/31/94
5,646,613	Cho	07/08/97	05/20/96
5,540,461	Nitschke et al.	07/30/96	11/04/94
5,483,449	Caruso et al.	01/09/96	

**(10) *Grounds of Rejection***

The following ground(s) of rejection are applicable to the appealed claims:

- A. Claims 1, 4, 7, and 25-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Genovese.

Genovese discloses a reactive personnel protection system comprising:

- a) an inflatable air bag, 23
- b) a gas generating system, 21
- c) deployment in response to proximate detection of a ballistic projectile, and col. 2, lines 33-36
- d) a radar-based detection system. col. 4, lines 40-43;  
col. 5, lines 4-6

- B. Claim 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Genovese in view of Khandhadia et al..

Genovese applies as previously recited. However, undisclosed is an air bag constructed of polyethylene. Khandhadia et al. teach an air bag constructed of polyethylene or polyester fibers,

Art Unit:

col. 3, lines 61-64. Applicant is substituting a particular material type for the material type of air bag disclosed in Genovese. It would have been obvious to a person of ordinary skill in this art at the time of the invention to apply the teachings of Khandhadia et al. to the Genovese personnel protection system and have a personnel protection system with a polyethylene or polyester fiber material air bag.

C. Claims 1, 4 and 25-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Cho.

Cho discloses a reactive personnel protection system comprising:

- a) an inflatable air bag, 14, 46
- b) a gas generating system, 16
- c) deployment in response to proximate detection of a ballistic projectile, and col. 7, lines 18-24
- d) a radar-based detection system. col. 3, lines 34-40

D. Claims 17 and 25 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Nitschke et al..

Nitschke et al. disclose a method of protecting personnel from the rapid approach of an object comprising:

- a) detecting the approach of said object, 10
- b) discriminating the presence of the object vs. electronic noise, 21
- c) activating a gas-generation system in response to presence of said object, and 22, 23

Art Unit:

- d) deployment of an air bag between said object and the personnel. 31, 32, 33, 34
- E. Claims 17 and 25 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Caruso et al..

Caruso et al. disclose a method of protecting personnel from the rapid approach of an object comprising:

- |  |                              |
|--|------------------------------|
| a) detecting the approach of said object,  | Accel. Signal                |
| b) discriminating the presence of the object vs. electronic noise,                   | 10                           |
| c) activating a gas-generation system in response to presence of<br>said object, and | 28                           |
| d) deployment of an air bag between said object and the personnel.                   | see reference<br>in entirety |

**(11) Response to Argument**

- A. With regard to the arguments directed to the restriction requirement, this issue is one properly pursued by petition. Consequently, it will not be further addressed by the examiner.
- B. Applicant argues that several claimed items are not present in Genovese, these arguments are addressed as follows. (1) With regard to the destructive object detection system, Genovese discusses conventional sensor-controlled energizers that act in response to the detection of motion (col. 4, lines 36-43). Genovese further discusses the different types of motion that would be sensed in order to activate the energizer (col. 2, lines 33-36). (2) With regard to the issue of a radar based projectile detection system, this feature is explicitly taught in col. 4, lines 36-43 and

Art Unit:

col. 2, lines 33-36 taken in combination. (3) With regard to the issue of a rapidly deployable air bag, see col. 3, lines 24-64. (4) With regard to the issue of rapid deployment of the air bag in response to the detection of an object, see col. 2, lines 33-36. Further see col. 4, lines 27-29, where Genovese discusses automatic deployment of the airbag in response to a predetermined action. With regard to the issue of detection of the object in proximity to the person, Genovese discusses placing the air-bag package in the target area to be protected (col. 1, lines 19-21). Further, the device could only function to protected personnel if in fact the sensing device detected motion in proximity to the personnel. This is common knowledge to anyone of skill in this art.

Applicant's further arguments are addressed as follows. Applicant argues that Genovese does not teach a device that responds to a ballistic projectile, once again the examiner points out the following recitation in Genovese (col. 2, lines 33-36; col.4, lines 26-29; and col. 4, lines 36-43). Applicant further argues the air bag is not deployed after detection of ballistic activity. Are we to believe that the airbag is deployed prior to detection of ballistic activity and then the confined personnel wait for a bullet to be fired. What would be the purpose of the automatic sensors that detect motion if they did not after the detection of the motion active the air bag? Applicant argues that the automatic motion-detecting sensors are only defined in the context of manual/automatic monitoring of personnel entering the building. However, this statement is contradictory to the teachings of Genovese (see col. 2, lines 33-36; and col. 4, lines 41-43). Applicant makes numerous arguments directed to the Genovese teachings with regard to

Art Unit:

Genovese being an object-restraining system. Genovese discusses his invention as having several different applications or embodiments (see col. 2, lines 10-46). Applicant wants to argue the applications or embodiments disclosed in Genovese that are not being relied upon as teachings with regard to his claimed invention. With regard to the argument that claim 1 as amended but not entered is allowable. This claim (in amended form) is not at issue in this appeal and will not be further addressed. Applicant argues that Genovese does not teach deploying an air bag across an opening in a room as claimed in claim 4. However, claim 4 does not claim this feature. This feature is claimed in a claim withdrawn from consideration and will not be further addressed. With regard to the claim limitation directed to an air bag of a woven ballistic material as claimed in claim 7, this feature is taught by Genovese (see col. 5, lines 29-31).

C. Applicant's arguments with regard to Cho are addressed as follows. (1) With regard to the issue of "a destructive object detection system", Cho explicitly describes his device as being "A system for minimizing automobile collision damage using radiant energy detectors" (see abstract). (2) With regard to the claim limitation directed to "a radar base projectile detection system", clearly Cho has several different sensing devices one of which is radar based (see col. 3, lines 28-39). With regard to the issue of "a projectile detection system", could not another vehicle be considered "a projectile" for which this device is clearly intended to protect against (see figs. 3 and 4). Clearly a ball would be considered to meet the claim limitation directed to a projectile (see col. 7, lines 18-22). With regard to the claim limitation directed to "rapid deployment of the airbag in response to detection of the approach of said object (or a projectile) in proximity to said

Art Unit:

person", clearly there is rapid deployment of the airbag (see entire reference). With regard to the issue of proximity to said person, the device is designed to protect the vehicle as well as the vehicles occupants (see col. 1, lines 11-21, and col. 7, lines 11-15). The sensor is located on the vehicle and therefore is clearly in proximity to the person being protected (see col. 4, lines 48-61, and figs. 3 and 4).

Applicant's further arguments are addressed as follows. Applicant argues that the objects for which protection is designed do not move at the speed of a destructive object. This invention is designed to respond to objects and vehicles whose speed exceeds 5 mph (see col. 5, lines 18-20). Clearly both other vehicles and balls are capable of speeds in excess of this. With regard to the argument directed to radar detection range (8-20 Ghz), this claim language is not at issue. These features are claimed in claim 2 and the rejection is not being applied to claim 2. With regard to the arguments directed to claim 1 as amended but not entered, since this claim has not been entered this issue is not the issue being appealed and will not be further addressed.

D. Applicant's arguments with regard to Nitschke et al. are addressed as follows. (1) Applicant argues that "a destructive object detection system" is not present. While it is the case that changes in acceleration sensed by sensor 10 are responsible for activating the devices, is not this change in acceleration the consequence of the operator of the vehicle braking suddenly because of the presence of another vehicle or object. Consequently, Nitschke et al. does teach an object detection system albeit in an indirect way. (2) With regard to the issue of "a radar based projectile detection system", no where in claims 17 or 25 is a projectile mentioned. The only thing

Art Unit:

claimed is directed to detection of an object. Further, a radar based detection system is not claimed as well. (3) With regard to the issue of "rapid deployment of the airbag in response to detection of the approach of said object in proximity to said person", sensor 10 clearly does this in combination with the operators action when encountering an oncoming vehicle. (4) With regard to the issue of "discriminating the presence of said object with respect to the presence of electronic noise", clearly this is what Kalman filter 21 does (see col. 4, lines 3-6). Applicant makes numerous arguments directed to sensor 10 not actually sensing the motion of an object, this is not the issue. Sensor 10 in combination with the sensing of the object by the operator meets this claim limitation.

E. Applicant's arguments with regard to Caruso et al. are addressed as follows. (1) With regard to the issue of "a destructive object detection system", Caruso et al. explicitly recites "If an acceleration is detected that surpasses a predetermined threshold, then it is assumed that the vehicle is undergoing an impact and discrimination calculations begin" (see col. 3, lines 37-40; and col. 1, lines 20-24). (2) With regard to the issue of "a radar based projectile detection system", these features are not claimed in either claim 17 or claim 25. (3) With regard to the issue of "rapid deployment of the airbag in response to detection of the approach of said object in proximity to said person". The feature directed to detection of the approach of the object has already been addressed (see col. 3, lines 37-40; and col. 1, lines 20-24). With regard to the issue of the detection device being in proximity to the operator, the detection device is mounted in the vehicle passenger compartment (see col. 1, lines 37-40). (4) With regard to the argument directed to

Art Unit:

"detecting the presence of said object with respect to the presence of electronic noise". Clearly the numerous filters going from the accelerometer to the deployment of the airbag module (see fig. 1 and col. 2, lines 17-26) meets this claim limitation.

F. Applicant's arguments with regard to Genovese in view of Khandhadia et al. are addressed as follows. (1) Applicant makes numerous arguments directed to claim elements that are present in Genovese and have already been addressed in section B. (2) With regard to the issue of motivation to combine the teachings of Khandhadia et al. with the airbag used in Genovese. There is explicit motivation to combine in both of these references. Genovese discusses several different material types for his airbag 23 (polymers, natural rubber, woven fabrics, etc.) (see col. 5, lines 28-30 of Genovese). Not only is Genovese demonstrating that many different material types are known to be used for airbags but he is encouraging a substitution of material types by use of the term "etc.". Khandhadia et al. uses different materials types for his airbags just as Genovese does (see col. 3, lines 60-64 of Khandhadia et al.) and further goes into specific material types for the suggested woven fabrics of Genovese. If this isn't a motivation to combine, what is? Just because Khandhadia et al. deals with other associated issues such as reducing toxicity does not remove it as a teaching of airbag material type in the airbag art. Further, the materials are equivalent. If they weren't equivalent, there wouldn't be a suggestion to freely substitute as has been made in both references. With regard to the issue of an aramid fiber, nylon is an aramid fiber (see col. 3, line 64). Once again applicant is selecting that portion of the

Art Unit:

reference (polyethylene material) for which the examiner is not relying to meet the claim limitation and arguing the not relying portion of the reference.

(12) For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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Primary Examiner (Group 3600)



**STEPHEN M. JOHNSON  
PRIMARY EXAMINER**

S.M.J.  
July 18, 1999

CPK 5-3A21